IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims

1.   (Currently Amended) A method of ~~building a redundancy list~~minimizing redundancy in a peer system in a peer-to-peer relay network, comprising:

receiving a first message including first identification information at a first peer system from a second peer system connected to said first peer system in a peer-to-peer relay network;

storing said first identification information;

receiving a second message including second identification information at said first peer system from a third peer system connected to said first peer system in said peer-to-peer relay network;

comparing said second identification information with said first identification information;

building a redundancy update message when said comparison of said first identification information to said second identification information identifies the first message and the second message as the same message,

wherein said redundancy update message is a message indicating that the first peer system is not to receive a new message from the third peer system because the new message has an alternate path to the first peer system,

wherein the redundancy update message comprises information identifying the first peer system as an origin peer system and information identifying the third peer system as a

source peer system and indicates that a next message from the source peer system is not to be

sent to the origin peer system; and

> sending said redundancy update message to said third peer system.

2.   (Original) The method of claim 1, wherein:

> wherein said second identification information is the same as said first

identification information

3.   (Original) The method of claim 1, wherein:

> a message includes data to be relayed, an origin identifier, a sequence value, and

addressing information, and

> the origin identifier of a message indicates an origin peer system.

4.   (Original) The method of claim 3, wherein:

> comparing said second identification information with said first identification

information includes:

> comparing the origin identifier of said first message with the origin identifier of

said second message, and

> comparing the sequence value of said first message with the sequence value of

said second message.

5.   (Original) The method of claim 3, wherein:

said redundancy update message includes an origin identifier and a recipient identifier,

the origin identifier of said redundancy update message indicates the origin peer system that is the same as the origin peer system indicated by the origin identifier of said first message and of said second message, and

the recipient identifier of said redundancy update message indicates said first peer system.

6.   (Previously Presented) The method of claim 1, further comprising:

disconnecting said first peer system from a connected peer system;

building a clear redundancy message; and

sending said clear redundancy message from said first peer system to each peer system connected to said first peer system in said peer-to-peer relay network.

7.   (Original) The method of claim 6, wherein:

said clear redundancy message includes a recipient identifier indicating said first peer system.

8.   (Previously Presented) The method of claim 6, wherein:

said connected peer system is said second peer system or said third peer system.

9.   (Original) The method of claim 1, wherein:

each peer system in said peer-to-peer relay network stores a connection limit defining a number of other peer systems up to which that peer system is permitted to connect, and

each peer system stores a set of one or more relay rules for relaying data to other peer systems connected to that peer system.

10.   (Original) The method of claim 1, wherein:

the data relayed by peer systems is update data for a network environment.

11.   (Original) The method of claim 1, wherein:

the data relayed by peer systems is update data for an online game.

12.   (Original) The method of claim 1, wherein:

at least one peer system is a network-enabled game console.

13.   (Original) The method of claim 1, wherein:

at least two peer systems are connected through the Internet.

14.   (Currently Amended) A method of ~~building a redundancy list~~minimizing redundancy in a peer system in a peer-to-peer relay network, comprising:

sending a message including identification information from a first peer system to a second peer system connected to said first peer system in a peer-to-peer relay network;

receiving a redundancy update message from said second peer system when a comparison of the identification information of the message to identification information of a second message from a third peer system identifies the first message and the second message as the same message,

wherein said redundancy update message is a message indicating that the second peer system is not to receive a new message from the first peer system because the new message has an alternate path to the second peer system,

wherein the redundancy update message comprises information identifying the second peer system as an origin peer system and information identifying the first peer system as a source peer system and indicates that a next message from the source peer system is not to be sent to the origin peer system; and

updating a redundancy list including one or more entries;

wherein each entry in said redundancy list stores a recipient identifier indicating a peer system and a message identifier, such that an entry indicates said first peer system is not to send a message to the peer system indicated by the entry when the message includes identification information matching the message identifier indicated by the entry.

15.   (Original) The method of claim 14, wherein:

a message includes data to be relayed, an origin identifier, a sequence value, and addressing information, and

the origin identifier of a message indicates an origin peer system.

16.   (Original) The method of claim 15, wherein:

the message identifier of an entry in said redundancy list indicates an origin peer system.

17.　　(Original) The method of claim 14, wherein:

said redundancy update message indicates identification information that is the same as the identification information of said message sent to said second peer system.

18.　　(Previously Presented) The method of claim 14, further comprising:

receiving a clear redundancy message including a recipient identifier indicating a connected peer system; and

updating a redundancy list by removing any entries in said redundancy list indicating said third peer system as the recipient identifier of that entry.

19.　　(Previously Presented) The method of claim 18, wherein:

said connected peer system is said second peer system.

20.　　(Original) The method of claim 14, wherein:

each peer system in said peer-to-peer relay network stores a connection limit defining a number of other peer systems up to which that peer system is permitted to connect, and

each peer system stores a set of one or more relay rules for relaying data to other peer systems connected to that peer system.

     21.   (Currently Amended) A peer system in a peer-to-peer relay network, comprising:

means for receiving a first message including first identification information from a first sending peer system connected to said peer system in a peer-to-peer relay network;

means for storing said first identification information;

means for receiving a second message including second identification information from a second sending peer system connected to said peer system in said peer-to-peer relay network;

means for comparing said second identification information with said first identification information;

means for building a redundancy update message when said comparison of said first identification information to said second identification information identifies the first message and the second message as the same message,

wherein said redundancy update message is a message indicating that the first peer system is not to receive a new message from the second sending peer system because the new message has an alternate path to the first peer system; and

means for sending said redundancy update message to said second sending peer system,

wherein the redundancy update message comprises information identifying the first peer system as an origin peer system and information identifying the second sending peer system as a source peer system and indicates that a next message from the source peer system is not to be sent to the origin peer system.

22.   (Original) The peer system of claim 21, further comprising:

means for building a clear redundancy message; and

means for sending said clear redundancy message from said peer system to each

peer system connected to said first peer system in said peer-to-peer relay network.

23.   (Original) The peer system of claim 21, further comprising:

means for sending a message including identification information to a recipient

peer system connected to said peer system in a peer-to-peer relay network;

means for receiving a redundancy update message from said recipient peer

system; and

means for updating a redundancy list including one or more entries;

wherein each entry in said redundancy list stores a recipient identifier indicating a

peer system and a message identifier, such that an entry indicates said peer system is not to send

a message to the peer system indicated by the entry when the message includes identification

information matching the message identifier indicated by the entry.

24.   (Original) The peer system of claim 21, further comprising:

means for receiving a clear redundancy message including a recipient identifier

indicating a disconnected peer system; and

means for updating a redundancy list by removing any entries in said redundancy

list indicating said disconnected peer system as the recipient identifier of that entry;

wherein each entry in said redundancy list stores a recipient identifier indicating a

peer system and a message identifier, such that an entry indicates said peer system is not to send

a message to the peer system indicated by the entry when the message includes identification

information matching the message identifier indicated by the entry.

     25.   (Original) The peer system of claim 21, wherein:

    said peer system stores a connection limit defining a number of other peer

systems up to which said peer system is permitted to connect, and

    said peer system stores a set of one or more relay rules for relaying data to other

peer systems connected to said peer system.

     26.   (Currently Amended) A computer program, stored on a tangible storage

medium, for use in a peer system in a peer-to-peer relay network, the program comprising

executable instructions that cause a computer to:

    process a received first message including first identification information from a

first sending peer system connected to said peer system in a peer-to-peer relay network;

    store said first identification information;

    process a received second message including second identification information

from a second sending peer system connected to said peer system in said peer-to-peer relay

network;

    compare said second identification information with said first identification

information;

    build a redundancy update message when said comparison of said first

identification information to said second identification information identifies the first message

and the second message as the same message,

wherein said redundancy update message is a message indicating that the first peer system is not to receive a new message from the second sending peer system because the new message has an alternate path to the first peer system; and

send said redundancy update message to said second sending peer system,

wherein the redundancy update message comprises information identifying the first peer system as an origin peer system and information identifying the second sending peer system as a source peer system and indicates that a next message from the source peer system is not to be sent to the origin peer system.

27.   (Original) The computer program of claim 26, further comprising instructions that cause a computer to:

build a clear redundancy message; and

send said clear redundancy message from said peer system to each peer system connected to said first peer system in said peer-to-peer relay network.

28.   (Original) The computer program of claim 26, further comprising instructions that cause a computer to:

send a message including identification information to a recipient peer system connected to said peer system in a peer-to-peer relay network;

process a received redundancy update message from said recipient peer system; and

update a redundancy list including one or more entries;

wherein each entry in said redundancy list stores a recipient identifier indicating a peer system and a message identifier, such that an entry indicates said peer system is not to send a message to the peer system indicated by the entry when the message includes identification information matching the message identifier indicated by the entry.

29.   (Original) The computer program of claim 26, further comprising instructions that cause a computer to:

process a received clear redundancy message including a recipient identifier indicating a disconnected peer system; and

update a redundancy list by removing any entries in said redundancy list indicating said disconnected peer system as the recipient identifier of that entry;

wherein each entry in said redundancy list stores a recipient identifier indicating a peer system and a message identifier, such that an entry indicates said peer system is not to send a message to the peer system indicated by the entry when the message includes identification information matching the message identifier indicated by the entry.

30.   (Original) The computer program of claim 26, wherein:

said peer system stores a connection limit defining a number of other peer systems up to which said peer system is permitted to connect, and

said peer system stores a set of one or more relay rules for relaying data to other peer systems connected to said peer system.